

Tuesday, May 10, 2016 11:33:59 AM

145737

Item ID: D4271-025

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: End Fitting Assembly Fwd Beam

Start Date: 5/3/2016 **Start Qty:** 300 ***3***

Cust Item ID:

Required Date: 5/5/2016 **Req'd Qty:** 3.00 ***3***

Customer:

Reference:

Approvals: Process Plan: dem Date: 16/05/09

Tooling: _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 145737

Tuesday, May 10, 2016 11:33:59 AM

145737

Page 2

Item ID: D4271-025 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: End Fitting Assembly Fwd Beam
Start Date: 5/3/2016 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 5/5/2016 Req'd Qty: 3.00 ***3*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC21- Final Inspection - Work Order Release	0.00							
130									
QC	Memo	0.30							
Quality Control									

DAS
21
9-89

SEP 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Picklist Print

Tuesday, May 10, 2016 11:34:04 AM

Page 1

Work Order ID: 145737

145737

Parent Item: D4271-025

D4271-025

Parent Item Name: End Fitting Assembly Fwd Beam

Start Date: 5/3/2016

Required Date: 5/5/2016

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP revA 11.07.20 new issue EC veriufied by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4149-5 *D4149-5* Eyebolt Stud		Manufactured	No			100	Each	9.0000	1	3			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST086				9					
					143341			9					
D4419-1 *D4419-1* Fwd Support Plate		Manufactured	No			100	Each	7.0000	2	6			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST097				7					
					123027			7					
D4281-1 *D4281-1* Spacer		Manufactured	No			100	Each	5.0000	1	3			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST090				5					
					117102			5					
D4281-3 *D4281-3* Spacer		Manufactured	No			100	Each	4.0000	1	3			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST090				4					
					123097			4					

SEP 16 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

Picklist Print

Tuesday, May 10, 2016 11:34:05 AM

Page 2

Work Order ID: 145737

145737

Parent Item: D4271-025

D4271-025

Parent Item Name: End Fitting Assembly Fwd Beam

Start Date: 5/3/2016

Required Date: 5/5/2016

Start Qty: 3.00

Required Qty: 3.00

AN4C13A	Purchased	No	100	Each	133.0000	2	6	DAS 6 9-89
AN4C13A					**			
BOLT								

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
OVER002	50	
m134508	50	
over003	50	
m134497	50	
ST344	33	
m134365	3	
m134573	30	

MS20427M4-20	Purchased	No	100	Each	93.0000	1	3	DAS 6 9-89
MS20427M4-20					**			
RIVET								

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	93	
118429	93	

MS20615-4M18	Purchased	No	100	Each	223.0000	10	30	DAS 6 9-89
MS20615-4M18					**			
Rivet								

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
OVER007	100	
m134502	50	
m134606	50	
ST306	123	
m134134	23	
m134370	50	
m134676	50	

SEP 16 2016

Tuesday, May 10, 2016 11:34:05 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Picklist Print

Tuesday, May 10, 2016 11:34:05 AM

Work Order ID: 145737

145737

Parent Item: D4271-025

D4271-025

Parent Item Name: End Fitting Assembly Fwd Beam

Start Date: 5/3/2016

Required Date: 5/5/2016

Start Qty: 3.00

Required Qty: 3.00

MS21043-4

Purchased

No

100

Each

889.0000

2

6

MS21043-4

135390

Nut

Location

Loc Qty

Loc Code

FG

40

DAS

104603

40

6

9-89

GA

95

m132803

95

OVER007

300

m134502

300

ST302

454

m133769

12

m134249

142

m134634

300

NAS1149C0432R

Purchased

No

100

Each

1,855.000

4

12

NAS1149C0432R

135544

WASHER

Location

Loc Qty

Loc Code

GA

428

DAS

m125807

428

6

9-89

ST266

1427

m134073

427

m134676

1000

SEP 16 2016

DQA: _____ Date: _____



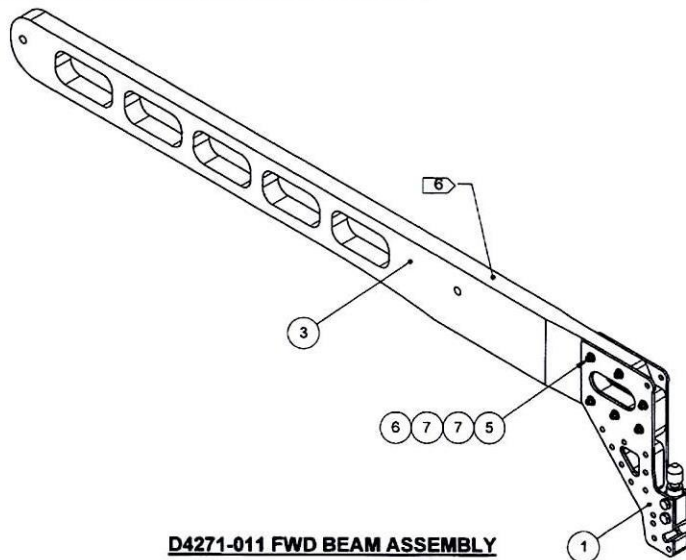
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

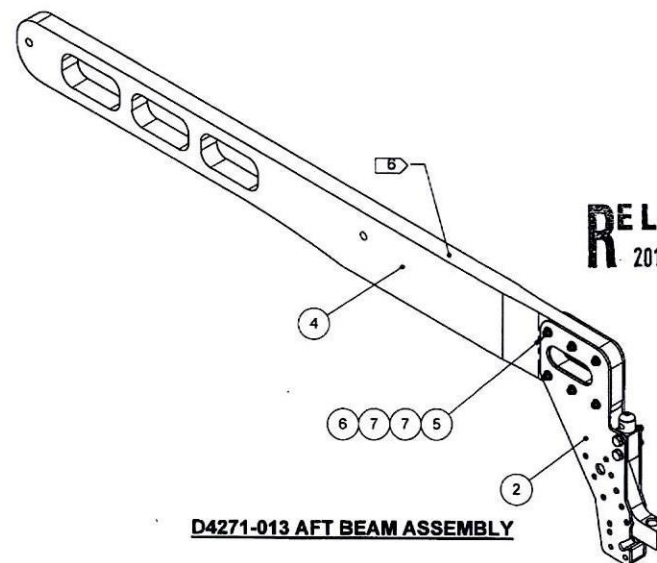
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

ITEM	QTY -011	QTY -013	P/N	DESCRIPTION
	X		D4271-011	FWD BEAM ASSEMBLY
		X	D4271-013	AFT BEAM ASSEMBLY
	-	-	D4271-021	DELETED AT REVISION D
	-	-	D4271-023	DELETED AT REVISION D
1	1	-	D4271-025	FWD BEAM END FITTING ASSEMBLY
2	-	1	D4271-027	AFT BEAM END FITTING ASSEMBLY
3	1	-	D4275-1	FWD BEAM
4	-	1	D4276-1	AFT BEAM
5	6	6	AN3C12A	BOLT
6	6	6	MS21043-3	NUT
7	12	12	NAS1149C0332R	WASHER



D4271-011 FWD BEAM ASSEMBLY



D4271-013 AFT BEAM ASSEMBLY

RELEASED
2011-07-28

NOTES:

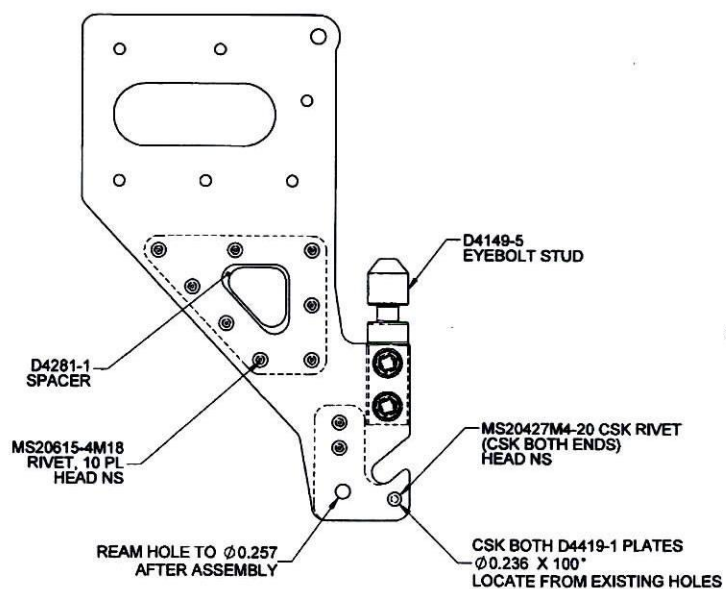
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4271-0XX" AND B/N "BXXXXX"
PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT -011: 11.02 lbs
-013: 12.97 lbs

D	DELETED -021 & -023 REPLACED BY -025 & -027 FOR Q.R. STEP INSTALLATION.	AJS	11.07.14
C	ADDED -021 & -023 FOR EASE OF CONFIGURATION MANAGEMENT. REFORMAT SEE PREV REV FOR DETAILS.	AJS	11.07.12
B	ITEM 10 CHANGED FROM AN3C12A TO AN4C13A	SC	10.12.01
A	NEW ISSUE	SC	10.11.25
REV.	DESCRIPTION	BY	DATE
DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	JP	DRAWING NO.	REV. D
MFG. APPR.	E	D4271	SHEET 1 OF 3
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	SUPPORT BEAM ASSEMBLIES	NTS
DATE	11.07.14	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

w/o 145737

2m 16/05/09

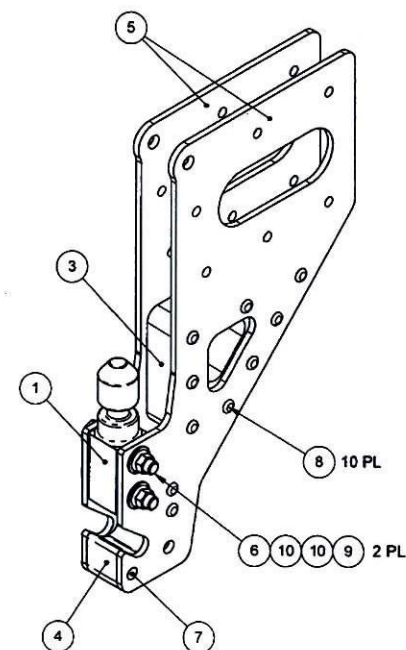
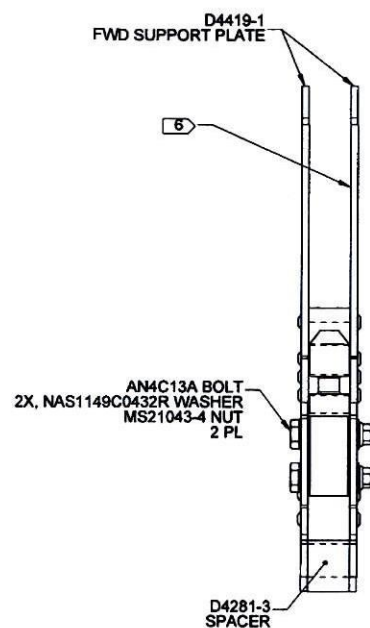
ITEM	QTY	P/N	DESCRIPTION
	X	D4271-025	FWD BEAM END FITTING ASSEMBLY
1	1	D4149-5	EYEBOLT STUD
3	1	D4281-1	SPACER
4	1	D4281-3	SPACER
5	2	D4419-1	FWD SUPPORT PLATE
6	2	AN4C13A	BOLT
7	1	MS20427M4-20	CSK RIVET (MONEL)
8	10	MS20615-4M18	RIVET (MONEL)
9	2	MS21043-4	NUT
10	4	NAS1149C0432R	WASHER



D4271-025 FWD BEAM END FITTING ASSEMBLY

NOTES:

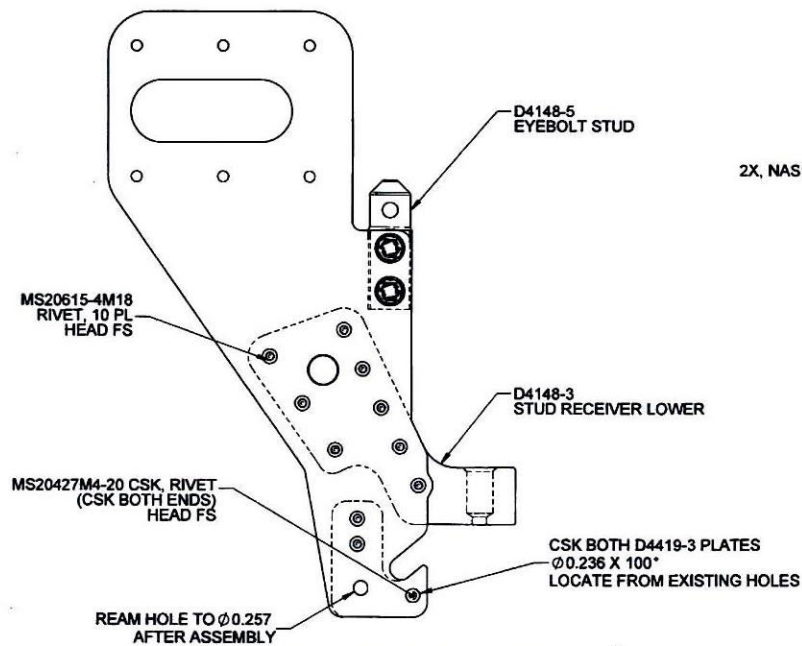
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART IDENTIFY WITH DART P/N "D4271-025" AND B/N "BXXXXX" PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT: 2.69 lbs



RELEASED
2011-07-28
JN

DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D4271	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT BEAM ASSEMBLIES	NTS
DATE	11.07.14	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

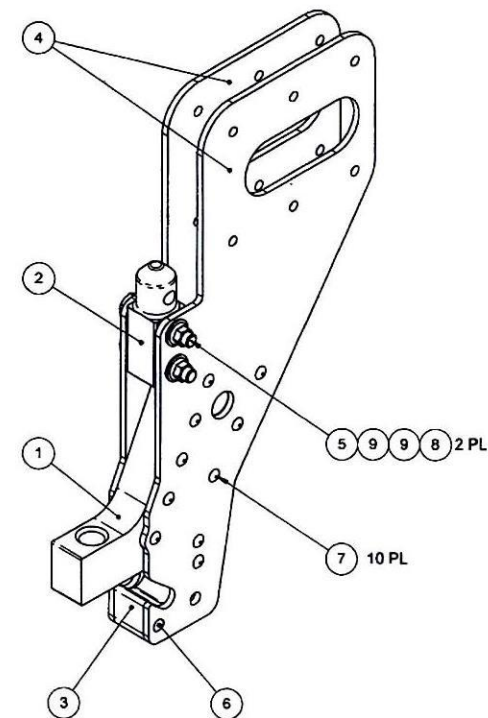
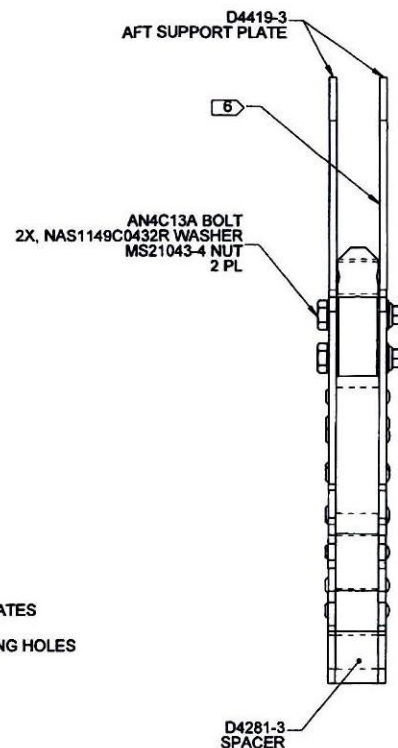
ITEM	QTY -027	P/N	DESCRIPTION
	X	D4271-027	AFT BEAM END FITTING ASSEMBLY
1	1	D4148-3	STUD RECEIVER LOWER
2	1	D4148-5	EYEBOLT STUD
3	1	D4281-3	SPACER
4	2	D4419-3	AFT SUPPORT PLATE
5	2	AN4C13A	BOLT
6	1	MS20427M4-20	CSK RIVET (MONEL)
7	10	MS20615-4M18	RIVET (MONEL)
8	2	MS21043-4	NUT
9	4	NAS1149C0432R	WASHER



D4271-027 AFT BEAM END FITTING ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART IDENTIFY WITH DART P/N "D4271-027" AND B/N "BXXXXX" PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT: 4.25 lbs



RELEASED
2011-07-28

DESIGN	JPH	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D4271	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT BEAM ASSEMBLIES	NTS
DATE	11.07.14	COPYRIGHT © 2010 BY DART AEROSPACE LTD	